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ABSTRACT

The role that individual learning proficiency, individual personality characteristics, and chance occurrences in the learner's environment play in self-directed professional development was examined through semistructured interviews with a purposeful sample of eight professional men and women of high achievement with no postsecondary schooling in their field. The interviewees were recognized professionals in the following fields: computer analysis; structural engineering; media technology; accounting; training/human resource development; journalism; computer research systems; and management/news media. The interviews were transcribed, and a word processor-based qualitative analysis technique was used to extract 529 quotes that were then reduced to a set of 155 paraphrased statements to eliminate duplication. The framework for the content analysis was derived from a literature review. The analysis results were formulated into a model of self-directed professional development incorporating the following elements: strongly felt need for self-development; set of self-ascribed values, characteristics, and beliefs; "autodidactic leap" (a leap in self-directed learning that is the result of environmental pressures and opportunities and that was described by all interviewees); environmental factors identified as "opportunities to learn"; and unfolding of successive learning objectives linked to learners' growing awareness of their professional field. It was observed that the informants perceived learning as a very real means to solve very real problems, and that hostile conditions only seemed to strengthen their resolve to succeed. It is this "problem-solving" quality that makes self-directed learning, in the context of professional development, more likely (and not, as was expected, less likely), to occur in conditions marked by a prevalence of opposing factors. (Contains 13 references.) (MN)

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TOWARDS AN ETIOLOGICAL MODEL OF SELF-DIRECTED PROFESSIONAL DEVELOPMENT

Paul Bouchard

Abstract

Self-directed learning (SDL) is defined as a function of three factors: (1) the individual's learning proficiency, (2) the individual's personality characteristics and (3) chanced occurrences in the learner's environment. These three factors are studied through semi-directed interviews of professional women and men, with no post secondary education. The interviewees' self concept, interpretation of past formal learning experiences and opportunity or willingness to embark on learning projects produced unexpected results. It could be inferred from the open-ended interviews, that the informants' past experiences would not make autonomous learning palatable. A schema of self-directed professional development combining the three basic factors along with casual factors describe the course the learner may take to arrive at autonomous learning. The proposed etiological model moves towards understanding the self-directed determinants that incorporates the learners' learning proficiency, personality characteristics and circumstances encountered in their daily lives.

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TOWARDS AN ETIOLOGICAL MODEL OF SELF-DIRECTED PROFESSIONAL DEVELOPMENT

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Sam is a 45-year-old entrepreneur in the field of structural engineering. Over the years, he has put together a successful business that specializes in large building projects, ranging from hydro-electric dams to large commercial buildings. In his line of work, up-to-date knowledge is crucial. Sam keeps in touch with the latest developments in engineering by subscribing to professional journals, by reading all the documentation he can get his hands on, and by frequently discussing technical issues with his colleagues. Sam thinks of himself as proficient and knowledgeable in his field. His partners and employees, who are highly specialized engineers, respect him for his competence and professionalism.

Sam doesn't have a high school degree. Everything that Sam knows about his work - and that is quite a lot - he has learned outside any college or institution. When asked about his outlook on education and learning, Sam says, "I probably would have liked to go to college. But I don't think that I'm worse off for having learned on my own".

Where did Sam get his extraordinary knack for learning "on his own"? Why do some people have such a high capacity for autonomous learning? Sam is comfortable in a fast-changing environments

¹ This research was made possible by a grant from the Social Science and Humanities Research Council of Canada (SSHRC).

where new knowledge and skills need to be acquired or updated on a regular basis. He is willing and capable of engaging in high-level and high-stakes learning activities. As we all know, this is not a universal occurrence, and most of us at one time or another have found ourselves - or seen others - either reticent or unable to access those inner resources needed to pursue autonomous learning. What makes it possible for the two contrasting situations to occur? Can a set of specific circumstances, characteristics, or events answer the question, "*What makes self-directed learning happen?*"

The question is not moot. For years now, researchers and educational practitioners have been scrutinizing the SDL crystal from all possible angles with the strengthening belief that in that concept lies a promising venue for understanding - and who knows? - for improving adults' ability to learn autonomously. But the more we look at it, the less we are satisfied with simple or obvious explanations. Today, it is not enough to say that "some people" are blessed with a higher-than-average capacity for autonomous learning; neither is it satisfactory to ascribe self-directed learning to a set of predetermined skills that can be learned by anyone, anywhere; and also, SDL cannot be attributed solely to chance occurrences outside the learner's control².

THE RESEARCH PROBLEM

A brief look at the literature shows that several possible answers can be found to the question, "Why are self-directed learners self-directed learners"? Ironically, one of the first insights into this problem was an indirect outcome of Allen Tough's seminal work, *The Teaching Tasks Performed by Adult Self-Teachers* (1965),

² For a more detailed discussion of these three "paradigms" used to conceptualize self-directed learning, see my previous article in the Long & Associates series (Bouchard, 1994).

where it was found that many adults display a considerable propensity for autonomous learning. Critics, however, have pointed out that the subjects in Tough's study were mostly people of relatively high educational attainment (Brookfield, 1985). Beyond Tough's oversight in convening his sample, it can be inferred from that observation that college-educated people could indeed possess more developed skills when it comes to self-directed learning. It can be further implied that academic learning, with its emphasis on formally set objectives, rigorously designed learning activities, and carefully selected resources, induces learners to internalize the principles of instructional methodology to the point where eventually, they become competent to accomplish not only the *learning tasks* necessary to acquire new knowledge and skills, but also in conducting the *teaching tasks* involved in planning, designing, and carrying out their own instruction. It is in this sense that the subjects of Tough's initial study were able to "Learn Without a Teacher": they were capable of taking on the instructional role, and thereby of being, in fact, their own "teacher".

Another explanation for the occurrence of self-directed learning is simply that some people just are really good at learning. For example, Sam could be said to be a highly competent learner because he can assimilate whatever information he chooses quickly and efficiently. The underlying assumption here is that the proficient learner will feel comfortable in many situations, whether they are to a degree self-directed, or other-directed. The difference between learning in either mode will be largely the result of the specific contingencies of each situation, and not of any inner predisposition for autonomous learning in particular. In this case, Sam could be characterized as a self-directed learner "by default". Since he never finished high-school, he could not enroll in a technical college. Nevertheless, because he is a proficient learner, he acquired the skills he needed. Indeed, Sam was able to learn *in spite of* his situation, because he is a proficient learner.

A third explanation of "Why self-directed learning occurs" is that in certain circumstances, people will be more likely to acquire knowledge and skills autonomously. Exactly what those circumstances are has not been explored in detail, but Spear & Mocker (1984) offer a typology based on three polarized dimensions, namely whether the learning is "anticipated" or "unanticipated", whether the learning episodes represent "single" or "multiple" events, and whether the (multiple) learning events are "related" or "unrelated". Interestingly, of the three "elements" used by Spear & Mocker to derive their analysis (learner expectations, learner skills, available resources), only one has to do with the world external to the learners themselves: the resources available in their environment.

Thus, we have three sets of explanations for the existence of self-directed learning, namely that SDL is a function of (1) the individual's self-instructional proficiency; (2) the learner's built-in personality characteristics; and (3) fortuitous occurrences in the immediate environment. Each of these antecedents, taken individually, do not offer a satisfactory causal chain. For example, two people with similar personalities, or finding themselves in similar circumstances, may or may not learn, or even share a similar approach to learning. Our hope in conducting this study has been that by looking at these three sets of factors, and possibly by uncovering others, it would be possible to produce a wider view of what could be called the etiological foundations of self-directed learning.

RESEARCH DESIGN

Certain assumptions were made regarding the nature of professional self-directed learning for the purpose of this study. The assumptions were: (1) that as a learning mode, SDL is a tangible phe-

nomenon; (2) that it leads to desirable consequences; and (3) that as a concept it is distinct from "other-directed learning", not only as a theoretical construct, but in a manner that the learners themselves can identify. These criteria were considered to be defining factors of SDL. In order to meet the 3 conditions (tangibility, desirability, and distinctness), learning projects were sought out according to the following criteria: they should be directly related to professional development (tangible); they should have led to some significant achievement (desirable); and the possibility of pursuing the same learning in a "formal" setting should have been present (it is assumed that when one "chooses" SDL over other possibilities, its distinctness as a learner preference is acknowledged implicitly).

The sample was a "purposeful" one, in the sense that it was assembled informally, with no other specification than the requirement that informants match these two predetermined criteria: (1) the informants have acquired identifiable, high-level professional skills (defined as skills routinely taught in post-secondary learning institutions); and (2) the learners were never enrolled in a post-secondary program in their field.

Eight professional men and women of high achievement, possessing no post-secondary schooling in their field, were asked to participate in open-ended, semi-directed interviews. The informants were recognized professionals in these areas:

1. Computer analysis
2. Structural engineering
3. Media technology
4. Accounting
5. Training/HRD
6. Journalism
7. Computer research systems
8. Management / newsmedia

The interviews were transcribed and coded; 529 quotes were extracted using a word-processor-based qualitative analysis technique. Quotes were then reduced to a set of 155 paraphrased statements in order to eliminate duplication.

The framework for content analysis was based on elements derived from the literature review. The determinants of self-directed professional development were classed according to three overarching categories, namely: factors related to the *individual* learners; factors related to the *process* of self-directed learning; and factors related to the *environment* in which the learning occurred. Each category was subdivided into sub-categories designed to accommodate in the most economical fashion all of the data. What emerged from the analysis was an integral view of the determinants of self-directed professional development.

THE LEARNERS AS SEEN BY THEMSELVES

Factors ascribed by the learners to themselves as *individuals* included a number of self-perceived personal traits and characteristics; some self-ascribed needs and aspirations; and a surprisingly rich collection of ideas, thoughts, convictions, and general beliefs of a philosophical nature, related to learning, work, and autonomy.

Among the self-ascribed personality characteristics, creativity, optimism, high capacity for learning, and curiosity were recurrent. However, other, less self-laudatory personality traits were also prominent: fear of failure, lack of patience, aversion to authority, rebelliousness, and low discipline, to name a few. The two sets of characteristics (self-laudatory and self-deprecating) seem to indicate that the informants were drawn to self-directed learning in part because they deemed themselves unsuited for learning in the traditional mode, where learners indeed are expected to deploy vast reserves of patience, subordination, discipline, etc.

The learner's needs and aspirations revolved around a deeply felt drive for professional development. One informant learned a computer language in record time, because he desperately needed a summer job; another, knowing that he would be laid off, studied accounting in his spare time in order to start his own business. One informant, after the birth of her child, quit her job as a baker and started a media technology trade magazine ("I needed more flexible hours").

The informants were particularly loquacious when it came to their values and beliefs on topics related to work, learning, and autonomy. A number of these "personal theories" had to do with the perceived shortcomings of formal education. Others involved the need for upgrading work skills, and for greater initiative on the part of individuals in society. When asked if they advocated that others follow in their footsteps, most informants responded negatively. It seems that they imputed their attitude to their particular experience, while acknowledging that reality was "different for others".

SELF-DIRECTED LEARNING AS PROCESS

The informants also talked about WHAT they did when they learned on their own. They mentioned several elements, including an emergent goal structure; a number of specific learning strategies; and the "autodidactic leap".

Typically, their first step was to set realizable objectives for themselves. Interestingly, these "learning objectives" had little in common with those formulated by instructional designers in the guise of "anticipated learning outcomes". From the self-directed learners' point of view, the real learning outcomes were not so much the knowledge and skills acquired through learning, but the actual effects that these new skills would have on their lives. In the

context of professional development, Dubin (1990) has referred to the "valence" of the learning activity as the basis for the learner's decision to engage in the learning process. In our study, the actual learning goals were not identified by the learners before starting their learning process, but they were rather constructed heuristically throughout its progression. In this way, learners were able to adapt to the particular contingencies of the moment, without losing sight of their overall intent.

Learning strategies employed by the learners were as diverse as they were creative. Some of the most unusual strategies encountered were: hiring consultants on a one-time-only basis; delegating research tasks to employees; validating new knowledge by discussing with competitors; modifying learning objectives to match the available resources (rather than the other way around). One of the most prominent features common to all projects was the initial *leap* taken by each learner at the outset of their project. The "autodidactic leap" can be characterized as an action taken by the learners, beyond which they had no other choice but to learn on their own, often under considerable pressure. This point-of-no-return left the learners virtually "flying without a net". In each case, although the actions taken were different, the results were strikingly similar. One informant, early in his career, actually falsified his qualifications in order to get a job. He then had to learn very quickly indeed when, to his dismay, he was hired on the spot as a computer programmer. A journalist quit her well-paying job in order to travel full-time to become "more knowledgeable about the world". Sam, an engineer, admits that he still takes the occasional leap. At the time of the interview, Sam was preparing a bid for a set of saltwater piers for the port authority. "I have never built anything like it, he says. The technology is brand new. I have assembled enough documentation to make the tender; if my bid wins, then there will be time to develop the expertise."

ENVIRONMENTAL FACTORS

The learners mentioned several types of events that functioned as triggers to their self-directed learning projects. These events were related to their work environment, their parental and established families, and their previous school environment. These were deemed "environmental" factors inasmuch as they represented the influence of the outside world on the learners' outlook and expectations.

The most important external influences for the informants were related to their work environment. For some, the trigger was a particularly successful or stimulating episode on the job. For others, motivation was reinforced by a boss or a colleague who suggested they take on new functions or responsibilities. These experiences seem to have played a major role in building the learners' self-confidence in preparation for the "autodidactic leap".

Some informants, but not all, cited parental influence as a factor in their self-directed orientation. Most of them came from families of low educational attainment, but where formal schooling was highly valued. The informants themselves agreed that for most other people, schooling was an important ingredient for success and happiness. Still, they admitted that for them, their own mode of learning was better. (Perhaps this has something to do with the fact that several informants considered themselves "misfits" in formal learning situations.) Other family influences that were cited included support from a spouse, and the presence or expectation of a child as a motivation for a change in lifestyle.

Both good and bad previous school experiences were described by the informants. Happy experiences were cited as conditions that helped them develop a love for learning and the self-confidence to learn autonomously. Unhappy experiences were cited as one more reason to eschew formal learning. One informant realized that

he was capable of learning on his own when an apathetic teacher failed to provide suitable instruction in an introductory statistics course.

TOWARDS AN ETIOLOGICAL MODEL

One interesting aspect of the informants' stories was the way that each set of factors interacted with each other to produce unexpected results. Determinants that were cited as having a positive influence on the learning project's realization, could very well have had the opposite effect. For example, being the sole caretaker of a young child could have been seen as a reason to postpone more ordinary activities, let alone a major learning project. Similarly, unhappy school experiences could well have discouraged, rather than stimulated further learning. The learners' self-image was not found to be particularly conducive to self-directed learning readiness. Overall, the diversity of the learners' experiences throughout their lives does not point to a particular pattern of determination. Certainly, it cannot be inferred that a direct causal chain exists, but on the other hand, it cannot be said that self-directed learning occurs purely by chance, without any kind of identifiable determining influences.

This contradiction points to the need to identify an underlying motif that would combine the various elements into a coherent whole. These links could serve as the basis for an etiological model of self-directed professional development.

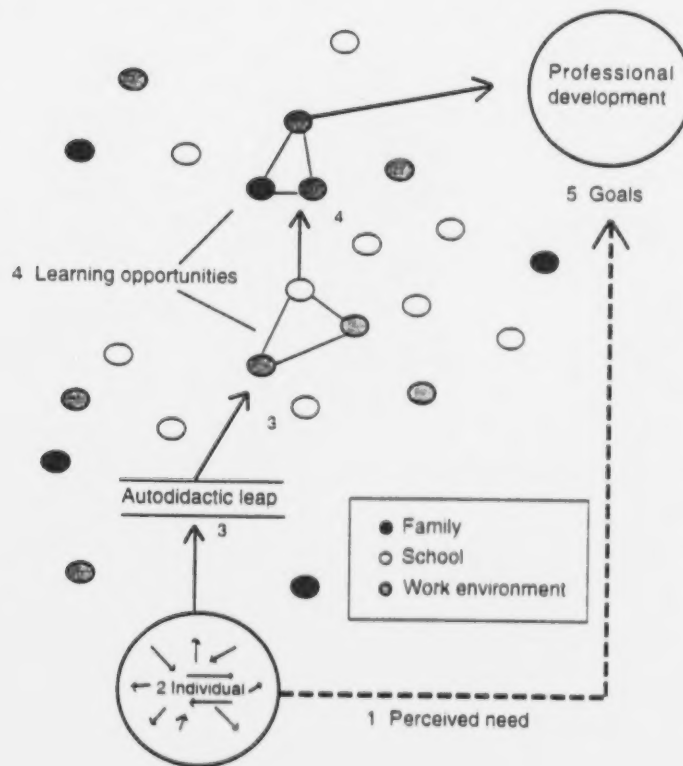


Figure 1. An Etiological Model of Professional Development

Figure 1 shows how the individuals' self-perceived characteristics intersect with their need for professional development. Because of environmental pressures and opportunities, the "autodidactic leap" is made. The learners, rather than engage in a carefully planned learning program, instead find it advantageous to identify opportunities to learn within their environment. In this sense, self-directed learning as a process is more akin to creative entrepreneurship than to programmed learning. The learning opportunities, similar to business opportunities, are identified by the learners as part of their interaction with the resources found in their environment. Indeed, it can be said that the learners *create* the

learning opportunities using the raw materials at hand. It seems that it is the learners' interpretation, or perception of their particular situation, and of the possibilities that it offers, that is the determining factor in their pursuit.

To summarize, our model of self-directed professional development incorporates the following elements:

1. A strongly felt need for self-development;
2. A set of self-ascribed values, characteristics, and beliefs;
3. The *autodidactic leap*, a phenomenon described by all subjects;
4. Environmental factors that are identified as "opportunities to learn";
5. An unfolding of successive learning objectives that are linked to the learners' growing awareness of their professional field.

This model incorporates the information derived from the interviews into a relational pattern. It shows how it is possible to understand the determinants of self-directed professional development in a way that incorporates the learner's abilities, their psychological make-up, and the particular circumstances that they encounter in their lives.

CONCLUSION

The question, "What makes SDL occur?" has several implications for the development of self-directed learning as both an area of research and practice. First, the literature raises the conjecture that formal education actually improves skills for autonomous learning. In the past, "learning to learn" has often been touted as the ultimate purpose of formal education. If it is true that formal schooling represents a credible venue for developing such skills, then surely this is one of the most important achievements of the educational sys-

tem. By taking a closer look at the processes through which highly proficient learners acquire their skills, perhaps it would be possible to develop a curriculum component that addresses that issue.

However, if self-directed learning skills are acquired "by default" and more or less universally through higher learning, it has not been shown that these skills cannot be acquired otherwise. In our sample, Sam (a real person, not his real name) had very little formal education, while exhibiting a remarkable capacity for self-directed learning. Several other studies support the notion that self-directed learning, in fact, occurs in every stratum of society, and in populations with extremely diverse educational backgrounds (Armstrong, 1971; Brookfield, 1982; Kondani, 1982; Serre, 1977). Hence, if formal learning represents one path for acquiring the skills for self-directed learning, it is certainly not the only one. One implication for future research is that some generic experiences could lead to an increased capacity for self-directed learning.

Another observation that emerges from the data is that some learners appear to be more proficient in situations that require self-directed, rather than other-directed approaches to learning. As was pointed out earlier, the question of the specificity of self-directed learning readiness has been a contentious one among researchers in the past. Great efforts have been deployed to identify the elusive "inner characteristics" of self-directed learners by some authors, while others have insisted that the ability to learn is transferable across learning modes - in other words, that SDL is largely the domain of individuals who display an above-average ability to learn, regardless of the type of situation. One conclusion that can be derived from the now-famous (and at times, entertaining) exchange surrounding that very issue in the journal *Adult Education Quarterly*, opposing L. Field (1989) to the proponents of the measurability of self-directed learning "readiness" is that the belief in either the specificity or non-specificity of SDL as a learner characteristic is largely, to this day, a matter of opinion (Bonham, 1991;

Field, 1991; Guglielmino, 1989; Long, 1989;). The problem is not so much that SDL cannot be shown to be attributable to some set of inner qualities, but that some doubt remains as to the specificity of the constructs underlying the instruments devised for measuring those qualities. Our research points to a mid-point between the two opposing views. There is little doubt that self-directed learners are animated with an uncommon will to learn, but what distinguishes them from highly motivated students in formal situations, is their preference for autonomous learning (or, as was the case for several of our informants, their abhorrence of formal learning situations) within the framework of their self-perceived characteristics and aspirations.

Third, self-directed professional development as an etiological model points to a set of occurrences that are conducive to autonomous learning *when taken together*. A person with the potential to be a proficient self-directed learner, might not take the "leap" if other conditions are not met; opportunities to learn might not be identified without an urgently felt need for professional development; likewise, the choice to pursue learning in an autonomous mode might not be exercised in the absence of a set of specific, self-perceived personality traits such as self-reliance, ability to learn, and independent attributional style.

Finally, the question posed at the outset of this research relied implicitly on the assumption that somehow, certain factors could be found to be "favorable" to the occurrence of SDL. In fact, it was discovered that self-directed learning often occurs as a response to an adverse, rather than a propitious contingency. To be sure, certain conditions were found to be favorable to the unfolding of the learning projects, but the more striking feature of the examples under study was their apparent resiliency in the face of adversity. Our observation was that the informants perceived learning as a very real means to solve very real problems, and that hostile conditions only seemed to strengthen their resolve to succeed. It is

this "problem-solving" quality that makes self-directed learning , in the context of professional development, *more* likely (and not, as was expected, *less* likely) to occur in conditions marked by a prevalence of opposing factors.

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